



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,572	07/19/2005	Gabriele Perego	09875.0001	1670
22852	7590	06/08/2006	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			MAYO III, WILLIAM H	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/542,572	Applicant(s) PEREGO ET AL.	
	Examiner William H. Mayo III	Art Unit 2831	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-94 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 47-94 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/19/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in National Application No. PCT/EP03/00482, filed on January 20, 2003.

Information Disclosure Statement

2. The information disclosure statement filed July 19, 2005 has been submitted for consideration by the Office. It has been placed in the application file and the information referred to therein has been considered.

Specification

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:
(1) if a machine or apparatus, its organization and operation;

- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

4. The abstract of the disclosure is objected to because in lines 7-9, the abstract refers to purported merits or speculative applications of the invention. The applicant is required to delete the lines in order to provide the abstract with proper content.

Correction is required. See MPEP § 608.01(b).

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 47-94 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-48 of U.S. Patent No. 6,824,870.

Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the claimed subject matter is disclosed in various combinations of claims.

Claim Objections

7. Claims 71-94 are objected to because of the following informalities: Throughout the stated claims, the term "polyene" is misspelled. The applicant is required to correct all instances of such misspelled word with the correct term --propylene--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 47-94 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Castellani (Pat Num WO 02/03398A1). Castellani discloses a recyclable covering for transporting and distributing medium or high voltage energy thereby possessing superior mechanical and electrical properties, including high dielectric strength (abstract). Specifically, with respect to claim 47, Castellani discloses a cable (1) comprising at least one electrical conductor (2), and at least one extruded covering layer (3) based on a thermoplastic polymer material in admixture with a dielectric liquid,

wherein the thermoplastic polymer material is selected from: (a) at least one propylene homopolymer or at least one copolymer of propylene with at least one olefin comonomer selected from ethylene and an α -olefin other than propylene, said homopolymer or copolymer having a melting point greater than or equal to 1300C and a melting enthalpy of from 20 J/g to 100 J/g; (Page 4, lines 8-15) or (b) a mechanical mixture comprising at least one propylene homopolymer or copolymer (a) and (c) at least one elastomeric copolymer of ethylene with at least one aliphatic α -olefin, and optionally a polyene (Page 5, lines 15-20), the concentration by weight of said dielectric liquid in the thermoplastic polymer material is lower than the saturation concentration of said dielectric liquid in the thermoplastic polymer material, and said dielectric liquid has the following characteristics'. an amount of polar compound lower than or equal to 2.5% by weight with respect to the total weight of the dielectric liquid (Page 9, lines 9-10), a melting point or a pour point lower than 800C', and a ratio of number of aromatic carbon atoms with respect to the total number of carbon atoms lower than 0.6, when the dielectric liquid is aromatic (Page 4, lines 15-20). With respect to claim 48, Castellani discloses that wherein the propylene homopolymer or copolymer (a) has a melting point of 1400C to 170°C (Page 5, lines 27-28). With respect to claim 49, Castellani discloses that the propylene homopolymer or copolymer (a) has a melting enthalpy of 30 J/g to 85 J/g (Page 5, lines 29-30). With respect to claims 50-51, Castellani discloses that the propylene homopolymer or copolymer (a) has a flexural modulus, measured according to ASTM standard D790, at room temperature, of 30 Mpa to 1400 MPa (Page 4, lines 29-33). With respect to claim 52, Castellani discloses that the propylene homopolymer

Art Unit: 2831

or copolymer (a.) has a melt flow index (MFI), measured at 2300C with a load of 21 .6 N according to ASTM standard D1238/L, of 0.05 dg/min to 10.0 dg/min (Pages 4-5, lines 34-35 and 1-5 respectively). With respect to claim 53, Castellani discloses that the propylene homopolymer or copolymer (a) has a melt flow index (MFI), measured at 2300C with a load of 21 .6 N according to ASTM standard D1238/L, of 0.4 dg/min to 5.0 dg/min (Pages 4-5, lines 34-35 and 1-5 respectively). With respect to claim 54, Castellani discloses that the propylene copolymer (a) the olefin comonomer is present in a quantity of less than or equal to 15 mol % (Page 5, lines 1-9). With respect to claim 55, Castellani discloses that the propylene copolymer (a) the olefin comonomer is present in a quantity of less than or equal to 10 mol % (Col 5, lines 4-9). With respect to claim 56, Castellani discloses that the propylene copolymer (a) the olefin comonomer is ethylene or an α -olefin of formula $\text{CH}_2=\text{CH-R}$, where R is a linear or branched $\text{C}_2\text{-C}_{10}$ alkyl (Page 5, lines 4-9). With respect to claim 57, Castellani discloses that the α -olefin is selected from: l-butene, l-pentene, M-methyl-l-pentene, l-hexene, l-octene, l-decene, 1-dodecene, or mixtures thereof (Page 5, lines 4-9). With respect to claim 58, Castellani discloses that the propylene homopolymer or copolymer (a) is selected from: (a1) a propylene homopolymer or a copolymer of propylene with at least one olefin comonomer selected from ethylene and an α -olefin other than propylene, having a flexural modulus generally of 30 Mpa to 900 MPa (Page 5, lines 10-14); or (a2) a heterophase copolymer comprising a thermoplastic phase based on propylene and an elastomeric phase based on ethylene copolymerized with an α -olefin (Page 5, lines 15-19). With respect to claim 59, Castellani discloses that the propylene homopolymer or

copolymer of (a1) has a melting point of 140°C to 170°C (Page 5, lines 27-31). With respect to claim 60, Castellani discloses that the propylene homopolymer or copolymer of (aj) has a melting enthalpy of 30 J/g to 80 J/g (Page 5, lines 30-35). With respect to claim 61, Castellani discloses that the propylene homopolymer or copolymer of (a1) has a fraction soluble in boiling diethyl ether in an amount of less than or equal to 12 wt%, having a melting enthalpy of less than or equal to 4 J/g (Pages 5-6, lines 30-35 & 1-10, respectively). With respect to claim 62, Castellani discloses that the propylene homopolymer or copolymer of (a1) has a fraction soluble in boiling n-heptane in an amount of 15 M% to 60 wt%, having a melting enthalpy of from 10 J/g to 40 J/g (Page 5, lines 30-35). With respect to claim 63, Castellani discloses that the propylene homopolymer or copolymer of (a1) has a fraction insoluble in boiling n-heptane in an amount of 40% to 85 wt%, having a melting enthalpy of greater than or equal to 45 J/g (Page 6, lines 4-7). With respect to claim 64, Castellani discloses that the α -olefin in the elastomeric phase of a heterophase copolymer of (a2) is propylene (Page 5, lines 27-30). With respect to claim 65, Castellani discloses that the heterophase copolymer of (a2) is a heterophase copolymer in which the elastomeric phase consists of an elastomeric copolymer of ethylene and propylene comprising 15 wt% to 50 wt% of ethylene and 50 wt% to 85 wt% of propylene with respect to the weight of the elastomeric phase (Page 6, lines 17-23). With respect to claim 66, Castellani discloses that the elastomeric copolymer of ethylene (c) has a melting enthalpy of less than 30 J/g (Page 6, lines 1-3). With respect to claim 67, Castellani discloses that the quantity of the elastomeric copolymer (c) is less than 70% with respect to the total weight of the

thermoplastic base material (Page 6, lines 17-23). With respect to claim 68, Castellani discloses that the aliphatic α -olefin in the elastomeric copolymer of ethylene (c) is an olefin of formula $\text{CH}_2=\text{CH-R}$, in which R represents a linear or branched alkyl group containing from 1 to 12 carbon atoms (Page 5, lines 4-9). With respect to claim 69, Castellani discloses that the aliphatic α -olefin is selected from propylene, l-butene, isobutylene, l-pentene, M-methyl-l-pentene, 1-hexene, l-octene, l-dodecene, or mixtures thereof (Page 5, lines 4-9). With respect to claim 70, Castellani discloses that the aliphatic α -olefin is selected from propylene, l-hexene, and l-octene (Page 5, lines 1-9). With respect to claim 71, Castellani discloses that the propylene in the elastomeric copolymer of ethylene (c) is a conjugated or non-conjugated diene, triene or tetraene (Pages 5-6, lines 27-35 & 1-7, respectively). With respect to claim 72, Castellani discloses that the propylene is a diene (Pages 5-6, lines 27-35 & 1-7, respectively). With respect to claim 73, Castellani discloses that the elastomeric copolymer of ethylene (c) is selected from: (c1) copolymers having the following monomer composition: 35 mol%-90 mol% of ethylene; 10 mol%-65 mol% of an aliphatic α -olefin; and 0 mol%-10 mol% of a propylene; and (c2) copolymers having the following monomer composition: 75 mol%-97 mol% of ethylene, 3 mol%-25 mol% of an aliphatic α -olefin; and 0 mol%-5 mol % of a propylene (Page 7, lines 7-15). With respect to claim 74, Castellani discloses that the dielectric liquid comprises an amount of polar compound between 0.1 wt% and 2.3 wt% (Page 8, lines 1-6). With respect to claim 75, Castellani discloses that the dielectric liquid has a melting point or a pour point between -130°C and $+80^\circ\text{C}$ (Page 10, lines 10-15, polyaromatic dielectric oil has this property).

Art Unit: 2831

With respect to claim 76, Castellani discloses that the dielectric liquid has a ratio of number of aromatic carbon atoms with respect to the total number of carbon atoms between 0.01 and 0.4 (Page 8, lines 1-6). With respect to claim 77, Castellani discloses that the dielectric liquid has a dielectric constant, at 25°C, less than or equal to 3.5 (measured in accordance with IEC 247) (Page 14, lines 10-15, FlexonR641 has this characteristic). With respect to claims 78-79, Castellani discloses that the dielectric liquid has a viscosity, at 400C, between 10 cst and 800 cst (measured according to ASTM standard D445-03) (Page 14, lines 10-15, FlexonR641 has this characteristic). With respect to claim 80, Castellani discloses that the dielectric liquid is selected from: mineral oils, naphthenic oils, aromatic oils, paraffinic oils, polyaromatic oils, mineral oils optionally containing at least one heteroatom selected from oxygen, nitrogen or sulphur', liquid paraffins; vegetable oils, soybean oil, linseed oil, castor oil; oligomeric aromatic polyolefins; paraffinic waxes, polyethylene waxes, polypropylene waxes', synthetic oils, silicone oils, alkyl benzenes, dodecylbenzene, ditocetylbenzyl) toluene, aliphatic esters, tetraesters of pentaerythritol, esters of sebacic acid, phthalic acid esters, olefin oligomers, optionally hydrogenated polybutenes or polyisobutenes', or mixtures thereof (Page 14, lines 8-26). With respect to claim 81, Castellani discloses that the dielectric liquid is selected from paraffinic oils and naphthenic oils (Page 14, lines 8-26). With respect to claims 82-84, Castellani discloses that the weight ratio of the dielectric liquid to thermoplastic polymer material is between 1:99-25:75 (Page 9, lines 5-11). With respect to claim 85, Castellani discloses that the thermoplastic polymer material is selected from propylene homopolymers or copolymers comprising at

Art Unit: 2831

least 40 wt% of amorphous phase, with respect to the total polymer weight (Page 5, lines 27-35). With respect to claim 86, Castellani discloses that the extruded covering layer based on said thermoplastic polymer material in admixture with said dielectric liquid is an electrically insulating layer (Page 9, lines 12-15). With respect to claim 87, Castellani discloses that the extruded covering layer based on said thermoplastic polymer material in admixture with said dielectric liquid is a semiconductive layer (Page 9, lines 16-23). With respect to claim 88, Castellani discloses a polymer composition comprising a thermoplastic polymer material in admixture with a dielectric liquid, wherein said thermoplastic polymer material is selected from: (a) at least one propylene homopolymer or at least one copolymer of propylene with at least one olefin comonomer selected from ethylene and an α -olefin other than propylene, said homopolymer or copolymer having a melting point greater than or equal to 130°C and a melting enthalpy of from 20 J/g to 100 J/g (Page 4, lines 8-20); and (b) a mechanical mixture comprising at least one propylene homopolymer or copolymer (a) and (c) at least one elastomeric copolymer of ethylene with at least one aliphatic α -olefin, and optionally a propylene', the concentration by weight of said dielectric liquid in the thermoplastic polymer material is lower than the saturation concentration of said dielectric liquid in said thermoplastic polymer material', and said dielectric liquid has the following characteristics an amount of polar compound lower than or equal to 2.5% by weight with respect to the total weight of the dielectric liquid', a melting point or a pour point lower than 80°C; and a ratio of number of aromatic carbon atoms with respect to the total number of carbon atoms lower than 0.6, when the dielectric liquid is aromatic

Art Unit: 2831

(Page 4, lines 15-20). With respect to claim 89, Castellani discloses that the propylene homopolymer or copolymer of propylene (a) has at least one of the properties: a flexural modulus, measured according to ASTM standard D790, at room temperature, from 30 Mpa to 1400 MPa, or a melt flow index (MFI), measured at 230°C with a load of 21.6 N according to ASTM standard D1238/L, from 0.05 dg/min to 10.0 dg/min (Col 4-5, lines 34-35 & 1-5, respectively). With respect to claim 90, Castellani discloses that the propylene homopolymer or copolymer (a) is selected from: (a1) a propylene homopolymer or a copolymer of propylene with at least one olefin comonomer selected from ethylene and an α -olefin other than propylene, having a flexural modulus generally of from 30 Mpa to 900 MPa (Page 4, lines 30-35); and (a2) a heterophase copolymer comprising a thermoplastic phase based on propylene and an elastomeric phase based on ethylene copolymerized with an α -olefin (Page 5, lines 1-35). With respect to claim 91, Castellani discloses that the elastomeric copolymer of ethylene (c) is selected from: (c1) copolymers having the following monomer composition: 35 mol%-90 mol% of ethylene', 10 mol%-65 mol% of an aliphatic α -olefin; and 0 mol%-10 mol% of a propylene', and (c2) copolymers having the following monomer composition: 75 mol%-97 mol% of ethylene', 3 mol%-25 mol% of an aliphatic α -olefin; and 0 mol%-5 mol% of a propylene (Pages 5-6, 26-35 and 1-35 respectively). With respect to claim 93, Castellani discloses that the dielectric liquid is selected from: mineral oils, naphthenic oils, aromatic oils, paraffinic oils, polyaromatic oils, mineral oils optionally containing at least one heteroatom selected from oxygen, nitrogen or sulphur', liquid paraffins; vegetable oils, soybean oil, linseed oil, castor oil; oligomeric aromatic polyolefins; paraffinic waxes,

Art Unit: 2831

polyethylene waxes, polypropylene waxes', synthetic oils, silicone oils, alkyl benzenes, dodecylbenzene, ditocetylbenzyl) toluene, aliphatic esters, tetraesters of pentaerythritol, esters of sebacic acid, phthalic acid esters, olefin oligomers, optionally hydrogenated polybutenes or polyisobutenes', or mixtures thereof (Page 14, lines 8-26). With respect to claim 93, Castellani discloses that the extruded covering layer based on said thermoplastic polymer material in admixture with said dielectric liquid is an electrically insulating layer (Page 9, lines 12-15). With respect to claim 94, Castellani discloses that the extruded covering layer based on said thermoplastic polymer material in admixture with said dielectric liquid is a semiconductive layer (Page 9, lines 16-23).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Sato et al (Pat Num 5,017,733), Wilkus et al (Pat Num 4,857,673), Sato et al (Pat Num 4,621,302), Berger et al (Pat Num 5,192,463), Commandeur et al (Pat Num 5,446,228), Commandeur et al (Pat Num 5,545,355), Commandeur et al (Pat Num 5,601,755); and Tsuruoka et al (Pat Num 6,001,933), all of which disclose thermoplastic compositions.

Communication

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-

Art Unit: 2831

272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Mayo III
Primary Examiner
Art Unit 2831

WHM III
May 26, 2006